

CLAIMS

I claim:

1. Device for fixing the front end assembly of a motorcycle comprising

an upper plate (33, 43, 73), a lower plate (34, 44, 64), a column shaft (37, 47, 67) connecting the lower plate (34, 44, 64) and the upper plate (33, 43, 73) by going through the column tube (5) of the chassis,

characterized in that a guide part (14) and a swivel joint element (12) are placed respectively or inversely in the upper and lower receptacles of the guide elements (6a) and (6b) of the column tube (5) and are usually placed by the motorcycle manufacturers in order to allow the rotation of the front end assembly, the two elements (14) and (12) being passed through by the column shaft (37, 47, 67), the rotating elements (11, 411) and (16, 416, 716) being placed respectively in the lower plate (34, 44, 64) and upper plate (33, 43, 73) in order to permit the rotation of these plates on the column shaft (37, 47, 67) which is immobilized for them in rotation relative to the tube (5),

a part (15) capable of sliding on the part (14) while holding the axle (37, 47, 67) which goes through it being placed between the part (14) and the upper plate (33, 43, 73), the assembly of the fixing device of the front end assembly formed by the two equipped plates (33, 43, 73 ; 34, 44, 64), the part (15), and the column shaft (37, 47, 67) is able to tilt by sliding of the part (15) holding the axle (37, 47, 67), on the part (14) united with the tube (5) and which guides the axle (37, 47, 67) in this movement in the median plane of the motorcycle and around the axis of rotation (30) which is perpendicular to the median plane of the motorcycle and goes through the bearing center of the swivel joint element (12).

2. Device according to claim 1, characterized in that the upper surface (20) of the part (14) and the lower surface (21) of the part (15) are cylindrical surfaces of the axis (30) perpendicular to the median plane of the motorcycle and going through the center of rotation of the swivel joint element (12).

3. Device according to claim 1, characterized in that a groove having parallel sides (18a) and (18b) is made in the part (14) in a manner so that the axle of this groove is contained in the median plane of the motorcycle and that the column shaft (37, 47, 67) can slide without play along this groove by, for example, the intermediary of the two flat surfaces (19a) and (19b) made on the shaft (37, 47, 67).

4. Device according to claim 1, characterized in that an element (13, 613a, 613b) prevents the rotation of the part (14) relative to the tube (5).

5. Device according to claims 1 to 4, characterized in that a nut (23), positioned at either of the two ends of the column shaft (37, 47, 67), the second end having a stop, makes it possible to lock the position of the shaft (37, 47, 67) at the desired angular value (E) while causing the adhesion of the cylindrical surface (21) of the part (15) on the cylindrical surface (20) of the part (14) by the pressure created by the compression of the parts (22, 722 ; 16, 416, 716 ; 15 ; 14 ; 5 ; 12 ; 24, 724 ; 11, 411) between this nut (23) and the stop of the axle (37, 47, 67).

6. Device according to claim 5, characterized in that on the cylindrical surface (21) of the part (15), small grooves are made over the lines parallel to the axis (30) of the surface (21), which engage perfectly with the combined grooves made on the surface (20) of the part (14), thus allowing an angular adjustment of the axle (37, 47, 67) relative to the tube (5) by steps of value (a) and a locking into position by positive locking.

7. Device according to any one of the claims 5 and 6, characterized in that two opposing threaded holes having an axis contained in the median plane of the motorcycle are made through the part (14) and/or the tube (5) thus allowing two screws (613a) and (613b) to adjust and lock the angular position (E) of the column shaft (37, 47, 67) relative to the tube axis (5).

8. Device according to claim 1, characterized in that the rotating element (416) is fixed by a part (25) on the upper plate (43) in a receptacle having an oblong shape (28a), with an axis contained in the median plane of the motorcycle, able to allow sliding without play and to allow the positioning of the rotating element (416) using adjustment screws (27a) and (27b) in order to modify the offset (B) on the upper plate (43) to a value (B') between (B-e) and (B+e).

9. Device according to claim 1, characterized in that the rotating element (411) is fixed by a part (35) on the lower plate (64) in a receptacle having an oblong shape (29a), with an axis contained in the median plane of the motorcycle, enabling the rotating element (411) to be slid without play and enabling its positioning using the adjustment screws (36a) and (36b) in order to modify the offset (B) on the lower plate (64) to a value (B'') between (B-f) and (B+f).

10. Device according to any one of the claims 8 and 9, characterized in that the rotating elements (416) and (411) respectively placed in the upper plate (43) and lower plate (44, 64) have a freedom of bearing rotation around the respective axes (32) and (31), capable of allowing the swinging of the upper plate (43) and lower plate (44, 64) around these axes (32) and (31).